

Abstract

This invention relates to a primary-controlled switched-mode power supply of the type of a free-running flyback converter, which comprises a transformer with a primary-side winding, a secondary-side winding and at least one auxiliary winding. The switched-mode power supply comprises a primary-side switch, which is connected to the primary-side winding, in order to interrupt a current flow through the primary-side winding, a freely oscillating circuit for the generation of switching pulses, which drive the primary-side switch, and a circuit for generating an image voltage between the terminals of the auxiliary winding, in order to generate an image voltage, which on the primary side forms a voltage to be regulated on the secondary side. In order to provide a switched-mode power supply of this type, which with reduced complexity enables an improved control characteristic and an increased flexibility with regard to the operating parameters, the switched-mode power supply further comprises a time control unit, which is coupled to the primary-side switch such that the duration of a turn-off period of the primary-side switch can be adjusted within a switching cycle.

FIG. 1